

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): An electronic system comprising a plurality of fault-monitoring systems each of which is adapted to output a fault signal when an input indicates that the electronic system is in a fault condition associated with the fault-monitoring system, wherein:

the fault-monitoring systems are arranged in a cascade fashion such that a fault signal output from one fault-monitoring system is provided as an input to a subsequent fault-monitoring system in the cascade of fault-monitoring systems to simulate a[.] fault condition associated with the subsequent fault-monitoring system.

Claim 2 (original): An electronic system according to claim 1 wherein the output of a final fault-monitoring system in the cascade is used as an indicator of a fault in one of the fault-monitoring systems.

Claim 3 (currently amended): An electronic system according to claim 1, the electronic system further being arranged to:

place the electronic system into a first fault condition and monitor for [[the]] a generation of a first fault signal from a first fault-monitoring device,
on the generation of a first fault signal from the fault-monitoring device after placing the electronic system into a first fault condition, to input the first fault signal to the second fault-monitoring device, and
in response to an output from a final fault-monitoring device to store a record to this effect in non-volatile memory.

Claim 4 (currently amended): An electronic system according to claim 3 wherein, on subsequent reversion of the electronic system to a non-fault condition, the electronic system

is arranged to check whether the non-volatile memory includes a record and when the non-volatile memory does not include a record on subsequent reversion, generate an alarm signal.

Claim 5 (previously presented): An electronic system according to claim 1 wherein a first fault-monitoring system is adapted to output a fault signal when the electronic system is placed into a switched-off condition.

Claim 6 (original): An electronic system according to claim 5 wherein the first fault-monitoring system is a watch-dog system.

Claim 7 (original): An electronic system according to claim 5 wherein the electronic system is associated with a vehicle and the electronic system is placed into a switched-off condition by turning an ignition key.

Claim 8 (previously presented): An electronic system according to claim 5 wherein a second fault-monitoring system has as an input the fault signal from the first fault-monitoring system, the second fault-monitoring system being adapted to output a fault signal when the electronic system experiences an under- or over-voltage condition.

Claim 9 (previously presented): An electronic system according to claim 1 further comprising storing a record of a fault signal output by any of the fault-monitoring systems to enable identification of a defective fault-monitoring system.

Claim 10 (original): A self-test method for an electronic system comprising a plurality of fault-monitoring systems each of which is adapted to output a fault signal when an input indicates that the electronic system is in a fault condition associated with the fault-monitoring system, the fault-monitoring systems being arranged in a cascade fashion such that a fault signal output from one fault-monitoring system is provided as an input to a subsequent fault-monitoring system in the cascade of fault-monitoring systems, the method comprising:

inputting the fault signal from one fault-monitoring system to a subsequent fault-monitoring system to simulate a fault condition associated with the subsequent fault-monitoring system.

Claim 11 (original): A self-test method according to claim 10 wherein the output of a final fault-monitoring system in the cascade is used as an indicator of a fault in one of the fault-monitoring systems.

Claim 12 (currently amended): A self-test method according to claim 10, further comprising:

placing the electronic system into a first fault condition and ~~[[:]]~~monitoring for ~~[[the]]~~ a generation of a first fault signal from a first fault-monitoring device, on the generation of a first fault signal from the fault-monitoring device after placing the electronic system into a ~~[[:]]~~first fault condition, inputting the first fault signal to the second fault-monitoring device, and in response to an output from a final ~~[[...]]~~ fault-monitoring device storing a record to this effect in non-volatile memory.

Claim 13 (currently amended): A ~~self-test~~ self-test method according to claim 12 further comprising, on subsequent reversion of the electronic system to a non-fault condition, checking whether the non-volatile memory includes a record and when the non-volatile memory does not include a record on subsequent reversion, generating an alarm signal.

Claim 14 (currently amended): A self-test method according to ~~claim 1~~ claim 10 further comprising outputting a fault signal from the first fault-monitoring system when the electronic system is placed into a switched-off condition.

Claim 15 (original): A self-test method according to claim 14 wherein the first fault-monitoring system is a watch-dog system.

Claim 16 (currently amended): A self-test method according to claim 14 wherein the electronic system[[.]] is associated with a vehicle and the electronic system is placed into a switched-off condition by turning an ignition key.

Claim 17 (previously presented): An electronic system according to claim 14 wherein a second fault-monitoring system has as an input the fault signal from the first fault-monitoring system, the second fault-monitoring system being adapted to output a fault signal when the electronic system experiences an under- or over-voltage condition.

Claim 18 (currently amended): A self-test method according to ~~claim 1~~ claim 10 further comprising storing a record of a fault signal output by any of the fault-monitoring systems to enable identification of a defective fault-monitoring system.

Claim 19 (currently amended): An electronic system comprising at least one fault-monitoring system[[.]], the electronic system being arranged to:

place the electronic system into a first fault condition and monitor for [[the]] a generation of a first fault signal [[.]]from a first fault-monitoring device,

on the generation of a first fault signal from the first fault-monitoring device after placing the electronic system into a first fault condition, store a record to this effect in non-volatile memory,

on subsequent reversion of the electronic system [[~~to a~~]] to a non-fault condition, check whether the non-volatile memory includes a record of a first fault signal and when the non-volatile memory does not include a record of such a first fault signal on subsequent reversion, generate an alarm signal.

Claim 20 (currently amended): An electronic system according to claim 19 wherein:
placing of the electronic system into a first fault condition comprises stopping operation of [[the]] a processor; and

subsequent reversion of the electronic system to a non-fault condition comprises
subsequent commencement of operation of the processor.

Claim 21 (previously presented): An electronic system according to claim 19 wherein the fault monitoring device comprises a voltage detector which generates a fault signal when an over-voltage occurs.

Claim 22 (currently amended): An electronic system according to claim 19 wherein the fault-monitoring device comprises a device for ~~monitoring~~ monitoring the operation of ~~[[the]]~~ a processor and generating a fault signal when a fault with the operation of the processor is detected.

Claim 23 (previously presented): An electronic system according to claim 19 further arranged to clear the non-volatile memory of the record once it has been determined whether or not the non-volatile memory includes a record of a fault signal.

Claim 24 (previously presented): An electronic system according to claim 19 further comprising a plurality of fault-monitoring systems, a fault signal output of a first fault-monitoring system being provided as an input to a second fault-monitoring system, such that an input to the second fault-monitoring system simulates a second fault condition.

Claim 25 (currently amended): An electronic ~~signal~~ system according to claim 24 wherein the output of a ~~[[:]~~final fault-monitoring system is used as an indicator of an overall fault in one of the fault-monitoring systems.

Claim 26 (currently amended): A self-test method for an electronic system, the method comprising:

placing the electronic system into a first fault condition and monitoring for ~~[[the]]~~ a generation of a first fault signal from a fault-monitoring device,

on the generation of a[[.]] first fault signal from the fault-monitoring device after placing the electronic system into a first fault condition, storing a record to this effect in non-volatile memory, [[.]]

on subsequent reversion of the electronic system to a non-fault condition, checking whether the non-volatile[[']] memory includes a record of a [[:]]first fault signal and when the non-volatile memory does not include a record of such a first fault signal on subsequent commencement, generating an alarm signal.

Claim 27 (currently amended): A self-test method according to claim 26 wherein the electronic system includes a processor, wherein:

the placing of the electronic system into a first fault condition comprises stopping operation of the processor; and
subsequent reversion of the electronic system to a non-fault condition comprises subsequent commencement of operation of the processor.

Claim 28 (currently amended): A self-test method according to claim 26 wherein the electronic system includes a processor, wherein:

the placing of the electronic system into a first fault condition comprises ~~starting~~ starting operation of the processor; and
subsequent reversion of the electronic system to a non-fault condition comprises subsequent cessation of operation of the processor.

Claim 29 (original): A self-test method according to claim 28 wherein the fault-monitoring device comprises a voltage detector which generates a fault signal when an over-voltage occurs.

Claim 30 (original): A self-test method according to claim 28 wherein the fault-monitoring device comprises a device for monitoring the operation of a processor and generating a fault signal on detection of a fault with the operation of the processor.

Claim 31 (original): A self-test method according to claim 28 further comprising clearing the non-volatile memory of the record once it has been determined whether or not the non-volatile memory includes a record.